

USEPA AMCO Superfund Site & Lead Cleanup CAG Meeting, October 17, 2011

EPA Attendees: Rose Marie Caraway
Steve Calanog
Leana Rosetti

EPA Contractors: Kent Baugh/ITSI
Yash Nyznyk/CDM
Carolyn Moore/CDM
Jack Medina (ilinterpret)

CAG Members: Bradley Angel
John Schweizer (Technical Adviser)
Brian Beveridge
Judy Johnson
Angie May
David Carter

Purpose of Meeting

- *Update community on AMCO investigations planned for the next few months*
- *Update community on progress of lead cleanup, ask for input on process so far*
- *Receive update on Lead Cleanup bench-scale testing and proposed schedule moving forward*

Welcome & Introductions

Leana Rosetti, EPA Community Involvement Coordinator (CIC) and EPA Co-Chair

- Ms. Rosetti pointed out that there is a handout. The handout has a map on the back that will be used as reference during Ms. Caraway's presentation.
- Ms. Caraway will talk about new investigations over the next few months and the status of Proposed Plan.
- Steve Calanog (EPA) will give an update on the status of the Lead Cleanup.
- John Schweizer, the community's technical adviser (TA), will provide comments on both the lead cleanup and the AMCO Site investigation activities and will also introduce the community website.

AMCO Superfund Site Update

EPA RPM Rosemarie Caraway

EPA Project Funding:

- Ms. Caraway related that additional U.S. Environmental Protection Agency (EPA) funding came through near the end of the 2011 fiscal year in September. With the additional project funding, the EPA project team will commence with further investigation activities. The planned soil characterization activities would have been performed as part of the remedial design activities (subsequent to the ROD) but are now taking place as supplemental remedial investigation activities.

Subsurface Survey:

- Last week a subsurface, geophysical survey was completed at the former AMCO property using magnetometer and ground penetrating radar (GPR) techniques. The objective of the subsurface survey was to determine whether there were underground storage tanks, metal drums, piping, or other objects within the subsurface. Magnetometer readings were collected across the AMCO yard. Ground penetrating radar was used inside the warehouse. The licensed geophysicist will prepare a report and interpretation of field observations and detected anomalies that may indicate subsurface metal objects. The EPA anticipates receiving results from the subsurface survey in November.
- Preliminary results indicate that a sump and possible buried piping were found outside of the warehouse. The sump was located in the northeastern corner portion of the AMCO yard. The sump was in the vicinity of the former location of an icehouse, which had burnt down. Metal detected metal anomalies may be buried piping and were detected in the AMCO yard.
- Bradley Angel, of Green Action, asked if the EPA found buried drums during their investigation.
- Ms. Caraway replied that no buried drums were encountered and nothing beyond the previously mentioned sump and possible buried piping was present based on preliminary results.
- In response to a question from Mr. Angel regarding buried drums, Ms. Caraway replied that a discussion in a previous EPA investigation interview, a worker had indicated that there might be one or more buried drums/tanks. The EPA wanted to ensure that there were no buried containers, so thermal remediation technologies could be considered.

Soil Characterization Activities:

- Ms. Caraway related that the next stage of investigation would be an extensive soil characterization, consisting of collecting soil samples from a number of soil borings at the AMCO Site (proposed soil boring locations shown on the handouts). The borings will be placed based on a 10-foot grid in the source area and a 20-foot grid outside of the source area. An estimated twelve depth-discrete samples will be collected within each boring for a total of around 1,500 samples. Each sample will be analyzed for a range of contaminants, including PCBs, pesticides, metals, and volatile organic compounds (VOCs). The total depth of the borings will be between 70 and 80 feet, depending on where the clay aquitard is encountered. The EPA does not want to fully breach the aquitard due to the risk of opening a pathway for contaminants into the deeper aquifer. The goal is to only sample 5 feet into the top of this aquitard.
- The investigation is expected to last about 6 months. There will be a drilling rig present Monday through Thursday. No samples will be collected on Friday because of the difficulty in ensuring receipt of samples at the analytical laboratory on the weekend (soil samples need to be analyzed within a certain holding time and labs do not typically operate on weekends). [Correction: As soil samples will be analyzed by a local laboratory, drilling and sampling will occur Monday through Friday, with drilling only occurring between 8 AM and 5 PM.] Analytical services will be sourced locally, rather than through the EPA's Contract Laboratory Program (CLP). The CLP laboratories are located at various locations around the country. Shipping samples across the country can result in delays (e.g., bad weather) and cause holding times to be missed.
- Ms. Rosetti requested that Ms. Caraway discuss worker protection during the soil characterization activities.
- Ms. Caraway: The primary source area is located just west of the warehouse. Residents might see workers in Tyvek suits and respirators and, possibly, supplied air. The supplied air, if used at all, will be used to clear the area and establish that the area is safe for respirator use. Ms. Caraway pointed out that these precautions are only necessary within a certain distance of the excavation or intrusive activity. Ms. Caraway indicated that when she is present at the site, you could see her using a respirator (when others may not be) not because of contaminant conditions at the Site, but because of a medical condition (asthma).
- Brian Beveridge, community co-chair, asked how the current investigation is different from previous drilling.

- Mr. Baugh noted that there will be more extensive sampling in the source area than had previously been performed. Previous investigations in the source area consisted of a total of 5 borings for well installation or CPT-MIP investigations, and sampling was limited. Sampling will take place on the AMCO site, within the most contaminated areas. Sampling within the source area will be different from other, recent intrusive investigations.

Air Monitoring:

- Ms. Caraway related that air monitoring will be performed before and during intrusive work. Baseline samples will first be collected to obtain an understanding of background conditions. Air monitoring devices (e.g., summa canisters), will be set up at a number of locations in the neighborhood. They will be placed based on our understanding of prevailing winds. Analytical results from these collection points will indicate whether the EPA needs to take additional precautions to protect the community. In addition, there will be real-time monitoring within the source area and work zone for worker protection.
- Ms. Caraway estimated that the baseline will consist of 7 days of air monitoring conducted prior to work starting. The baseline will be used to set up the air monitoring program. The sampling frequency could be decreased or increased based on the early air sampling data.
- Mr. Angel asked how quickly EPA would be able to respond if contaminants are found in the air samples.
- Ms. Caraway responded that during the drilling operations, the highest risk will be adjacent to the open borehole. Real time monitors will be used near the borehole that can detect exceedences of safe levels. After the samples are taken, the hole will be plugged immediately.
- Mr. Angel asked about people who have asthma near the site, like Ms. Caraway herself.
- Ms. Caraway responded that her use of a respirator would be while she was near drilling operations in the source area (i.e., adjacent to the borehole itself). Ms. Caraway added that she did not anticipate volatile levels would require respirators beyond the drilling location. Ms. Caraway assured Mr. Angel that the monitoring program will be designed to detect and mitigate elevated contaminant levels before posing a risk to residents.
- Ms. Caraway indicated that a description of the air monitoring program will be released for public review and will be reviewed by the Department of Toxic Substances Control (DTSC) to ensure that it is protective of the community. The air monitoring program plan will outline steps that will need to be taken if action levels are exceeded.
- Ms. Caraway noted that the greatest potential human health risk will be for the field staff at the drill rig within the work zone. Continuous real-time monitoring will be used to protect the field staff.
- Mr. Angel asked about sensitive receptors, such as babies or children that might not be able to handle levels that adults can handle.
- Ms. Caraway replied that risk numbers are developed based on exposure to residents (both adults and children) and workers. Even taking into consideration children, the risk tends to be highest for field staff (occupational exposure).
- Ms. Caraway added that odors may be apparent during the drilling operations, but that odors do not necessarily equate to human health risk. EPA will consider measures to suppress odors if they become an issue.
- Mr. Angel asked what would be causing odors.
- Ms. Caraway responded that odors could result from the presence of compounds at concentrations that do not present risk to human health.
- Ms. Caraway repeated that baseline levels for the neighborhood need to be collected before starting the work and in order to be able to establish action levels.
- Mr. Baugh also pointed out that if air monitoring data indicated exposure to workers adjacent to the borehole, the protocol will be to immediately plug the borehole.
- Ms. Caraway indicated that abatement and response measures to detected release of volatiles above action levels will be included in the air monitoring program plan.
- The EPA would like to start the soil investigation in the source area, because source area soil and groundwater samples need to be used for the treatability study. Collecting the source

area samples early in the program will allow the treatability study to be implemented soon. The treatability study is expected to be performed over a period of 6 months to a year.

- Ms. Caraway noted that EPA will keep the community informed about how the investigation is proceeding and what sampling and monitoring will be done. She added that this is the first intrusive activity within the source area in a long time but this investigation will not be as intrusive as the actual remedial action (e.g., as compared to soil excavation activities).
- Mr. Beveridge asked if there will be any new perimeter controls.
- Ms. Caraway replied that the current fence will remain in place and there will be no additional perimeter controls. The block will not be cordoned off. Ms. Caraway noted that the drill rig will be running from 8 AM to 5 PM and there will be noise. The expected duration of the investigation is 6 months.
- A community member asked if there will be exhaust from the drill rig.
- Ms. Caraway replied yes, but there is no way to control for that. Besides the AMCO site, the soil characterization investigations will take place on the large vacant lot, the small vacant lot, and on the parking lot on 3rd Street. The investigation is scheduled to commence the first week in November so that the drilling operation can be up and running before she takes leave in mid-December.
- There were a number of comments/questions regarding the schedule for community review of the proposed air monitoring program. A community member asked how the EPA will have the proposed air monitoring program set up and ready for community review two weeks prior to starting the investigation if the investigation is supposed to start in two weeks. The community member pointed out that based on that schedule the air monitoring program should be ready for community review today (October 17, 2011).
- Ms. Caraway recognized the confusion and responded that in fact, what she was now offering was a change in her anticipated schedule, as she was just now hearing the concern and request from the community to see a plan that they could review. Ms. Caraway indicated she will request a plan from her contractors and will provide it to the community.
- Ms. Rosetti noted that the EPA won't start the work on the AMCO source area until the air monitoring program is prepared and available for review. Mr. Baugh pointed out that all boreholes will be plugged overnight, eliminating the possibility of volatile emissions during non-work hours. Mr. Baugh added that there is an air monitoring program plan in the Focused Feasibility Study and that plan can be repurposed to suit this investigation.
- Ms. Caraway related that the EPA does not anticipate any residents will be exposed to contaminants due to the investigation and that the primary purpose of the air monitoring program is to address concerns raised by the public. The only anticipated potential for risk will be to workers within the work zone in the source area. Proper protective equipment and actions in response to higher concentrations will be used mitigate that risk. The air monitoring program will primarily serve to demonstrate that there are no impacts to the community. There will be real-time monitoring and real-time response to elevated volatile levels for the workers within the work zone.
- Mr. Beveridge repeated his concern about timing, with the investigation starting in 2 weeks and it being proposed to complete a week of baseline sampling, it seems that the EPA doesn't currently have a plan.
- Mr. Baugh pointed out that baseline data exist from the previous ambient air monitoring program. These existing data will be taken into consideration in developing the air monitoring program.
- Ms. Rosetti posited there are two things that will satisfy the community: 1) letting the community know when we will have an air monitoring program and 2) ensuring the community has time to review it with their technical adviser.
- Mr. Schweizer, Technical Advisor, indicated that he would need 3 days to review the document but will need to know when he will have the document to review because he needs to get approval to review it.
- Mr. Beveridge noted that this portion of the meeting had gone 15 minutes over the time allotted on the agenda. Mr. Schweizer is comfortable with having 3 days to review the plan. The CAG needs to decide if they are comfortable with that review time and decide how we

want to be notified if there are any issues. Mr. Schweizer indicated he will upload his comments on the CAG website.

- Mr. Angel indicated he does not trust that the plan is being developed on the spot and he feels that some of the information that has been presented is contradictory. He said that he wants the investigation to move forward but that the haphazard nature is concerning. How does the community know that the work will be performed in a safe manner?
- Yash Nyznyk, CDM, pointed out that the borehole installation and sampling within the source area is likely to be the only point where there is a risk of vapor release and that the greatest potential for exposure will be for the field personnel at the drill rig.
- Mr. Beveridge said that it appears the EPA has a plan and the EPA needs to give the community those documents so the community can review them. The community is not going to be comfortable with explanations of the plan and needs to see the documents and review them with their Technical Adviser. This is the process that is supposed to be followed.
- Mr. Nyznyk indicated the consultants will meet with the EPA and determine when it will be feasible to produce the plan for community review. Ms. Rosetti will work with TASC and John Schweizer to ensure that he is approved to review the plan under his contract.

Miscellaneous Site Activities:

- A community member asked about the sampling locations on the Union Pacific property.
- Ms. Caraway confirmed that the EPA has plans to install groundwater monitoring wells on UP property. These wells were planned last year but were not completed due to access issues. Ms. Caraway also indicated there will be additional sampling on the UP property after the current investigation.
- Ms. Caraway added that the EPA will be paying for the sampling that occurs on the UP property. The investigation on the UP property was delayed because access negotiation took a long time. The intent of the investigation on the UP property is to see if impacts from AMCO have extended to the UP property. The UP property currently has chemical impacts, but from a variety of sources. EPA will need to determine the source of these chemical impacts.

Lead Cleanup Update

EPA RPM Steve Calanog

- Mr. Calanog presented an update on the progress of the residential lead cleanup project in the South Prescott community.
- Project Objectives: The project objectives, which were developed through 2 years of community meetings are to:
 - Reduce risk of lead poisoning to children.
 - Perform work in a way that did not contribute additional impacts in the community.
 - Utilize local resources, where possible.
- With regards to minimizing lead risk:
 - "Treat, lock and cover".
 - The EPA is treating the lead and locking it into the soil through phosphate immobilization. Fishbones are being used as the phosphate source.
 - The EPA is covering treated soil with a green cap, which has been the traditional response to urban lead impacts in Alameda County.
 - Education of the public is as important as the actual cleanup. This contaminant has been around for so long that people have forgotten about it. Part of the efforts at education is to provide homeowners with information and best management practices. These best management practices include discussions on the homeowner's responsibilities in maintaining homes to reduce lead exposure. Lead is found outside and inside (in homes and in the garden). The EPA has gardening recommendations. Urban gardening is a growing activity and the EPA is providing information so people can feel safe about what they are growing and consuming. The

EPA is working with local agencies and groups to leverage their missions to increase safety. The EPA also provides raised gardening beds after cleanup of a yard.

- Additionally, nutrition plays a role in reducing lead poisoning in children (e.g., healthy diet has been shown to reduce the uptake of lead in children). The EPA is trying to increase awareness of that.
 - The EPA is working with existing agencies (e.g., City of Oakland) and non-profits (e.g., Rebuilding Together Oakland and City Slicker Farms). The EPA is looking for points of collaboration and opportunities to work together.
 - Recently, at the community center, EPA spent time with people from different agencies that deal with lead paint. Peeling lead paint on houses is recognized as an ongoing issue. Rebuilding Together is working with volunteers and the EPA to address that issue.
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- What's been happening?
 - EPA set up a community center in May and June 2011. It belongs to all of you. It is open Monday through Friday, 8 AM to 5 PM. The EPA also hosts an open house once a month, on the last Saturday of the month afternoon.
 - The EPA began demonstration yards in July and August.
 - Many of the ideas for low impact remediation came from the community. Sustainable approach includes:
 - Electric vehicles
 - Biodiesel vehicles
 - Native low/water plants for restoration
 - The EPA is hiring locally
 - Seven team members are graduates of the Cypress Mandela Training Center.
 - The contractor on the project is a women-owned business out of Emeryville.
 - Six South Prescott residents are working part-time or full-time on the project.
 - As of a couple weeks ago the project had created 14 jobs for people who were previously unemployed. There are a total of 43 people working on project.
 - Lessons learned: Successes
 - 20 yards are in progress; 8 have been completed as of today.
 - The community is engaged; neighbors are talking to neighbors and people are talking on the street about the cleanup.
 - 30 more yards are planned for completion in the next 4 months.
 - The cleanup and the South Prescott neighborhood has been in the news, including coverage in the New York Times. The coverage has focused on the use of fishbones, but the real story is the community collaboration.
 - Lessons learned: Challenges
 - Fishbones smell like fish. The EPA has come up with a way to reduce odors -- treat small areas with buckets of material rather than one ton sacks. The soil is covered up immediately after it is treated, to minimize odors.
 - The EPA has had to manage expectations of property owners. Some people want everything and some want very little. The EPA has to let them know exactly what can be done to make the soil safe and the community healthy.
 - The interest from other parties and communities has also been a challenge.
 - Scheduling sample analysis has been a challenge. This is a very thoroughly analyzed site and coordinating with different labs and getting sample results back at the right time has been challenging.
 - Mr. Calanog showed before, during and after pictures of some project sites.
 - Pictures showed the project team, and various project site outcomes, including raised planter beds, pathways and no-mow, native grass sod.
 - A community member asked why the EPA isn't using fish meal rather than fish bones.

- Mr. Calanog responded that the intent is to make the cost of treating a yard accessible so it can be widely applied. The current cost per square foot, including labor, is \$30 to treat and restore yard. The fish meal costs more than the fish bones. The fish bones are about \$700 per ton and about a ton per yard is required.
- Bioavailability and lead consumption
 - This method of analysis is about 3 years old.
 - Bioavailability analysis is being performed in three different labs. The project has been sending 200 samples to each of these labs each month.
 - The EPA is trying to form pyromorphite, a non-toxic lead-phosphate compound, through treatment. The pyromorphite is non-toxic and durable and stands up to environmental conditions.
 - Treatment is resulting in 60% pyromorphite formation in our treated soils.
 - Mr. Calanog showed pictures of pyromorphite taken under a microscope. He described how small the materials are. A micron is a millionth of a meter, a human hair is 100 microns wide. The pyromorphite crystals are 10 microns. If you put ten of them end to end you would have a human hair. The white particles shown are evidence of pyromorphite forming on the surface of lead particles. The pyromorphite crystals are formed when the phosphate comes into contact with the lead and as more crystals are formed over time the lead gets covered, or “enameled”, with the pyromorphite. Total lead stays the same but the toxicity is reduced because the lead is no longer bioavailable.
 - A community member asked what happens if you ingest lead with the pyromorphite coating. Mr. Calanog replied that if you ingest it, it will pass through you and will not harm you.
 - A community member asked if there has been testing to confirm that the lead is not absorbed. Mr. Calanog replied that the EPA is trying to confirm that the lead is no longer bioavailable without using animal testing. The challenge is to recreate conditions in the human stomach. Additionally, bioavailability changes with diet. If you are fasting, lead is more bioavailable. If you have low calcium levels, lead is more bioavailable.
 - A community member affirmed that WIC emphasizes calcium levels in children in order to reduce lead risk.
 - Mr. Calanog indicated that bioavailability analysis continues. The EPA is experiencing lab delays and has received some incomplete data sets and has observed some intra-lab variability. The EPA is trying to use in-vitro testing but it may be necessary to use in-vivo (live) bioavailability correlation.
 - The EPA is confident that bioavailability is being reduced but the analytical results from the different labs have had some significant differences and EPA has not determined the cause of those differences.
 - A community member asked if the EPA is doing pre-treatment and post-treatment blood testing of kids that live at project sites.
 - Mr. Calanog replied that EPA itself does not do blood level testing, and Alameda County no longer does mobile van testing., The County recommends people have their children tested by their doctor. EPA is considering following up with homeowners to see whether there is a difference in blood lead levels. However,
 - Ms. Rosetti asked if the EPA has used in vivo testing before. Mr. Calanog replied yes, but that was 6 years ago. The EPA used fasting pigs to test for bioavailability after treating soil from Joplin, Missouri. Ms. Caraway noted that she had worked with farming communities in Fresno where they were able to test children’s blood for lead by working with the local county authority. Working with Alameda County has been different.
 - A community member commented that a few years ago children in Oakland were misdiagnosed as having high blood lead levels and noted that might be the reason that the county and residents are wary of blood testing.

- Mr. Calanog summarized his presentation. The capping is standard protocol for lead impacted soil and the treatment takes it to another safer level. The EPA is doing more than local governments typically do in terms of treating lead-impacted soil. The EPA is certain that bioavailability is being reduced but does not have the consistent data sets that show it. Ms. Rosetti asked why the EPA isn't using the data from those other in vivo studies.
- Mr. Calanog replied that because each soil is unique, the EPA wants to use soil from this particular area (unique characteristics). Because of the variability of the soil there can be different effects as the fishbones degrade.
- A community member commented that Alameda County tested all of the land and most of the lead wasn't found in the older houses. Lead was typically found in the soil near the homes. Mr. Calanog briefly described the programs available for household paint lead remediation. The county has a program for renters and the City of Oakland has a program for homeowners, with some restrictions on income. For those properties that don't fit in either of those programs, there is the non-profit that helps other homeowners and tenants to clean up their paint.
- Mr. Beveridge noted that the point of those cleanup efforts is to make sure that the paint does not re-contaminate clean soil.
- Ms. Rosetti commented that the EPA is trying to also distribute information about lead paint. The EPA has the information from the City and from the County and Rebuilding Together and will be helping residents connect to those programs mentioned.
- Ms. Rosetti indicated that flyers have been sent to the neighborhood impacted by the lead cleanup. She added that the cleanup has been going well and that the EPA will begin to scale up for additional yards.
- The next phase of lead cleanup will be larger. There is a long list of people signed up. Local block captains have encouraged their neighbors to sign up. The open houses have been going well and there will be an open house at the end of the month at the demonstration yard at 1519 5th Street.
- A community member asked what the lead time is for lead cleanup. Ms. Rosetti replied that it varies. There are many people signed up but the team also prioritizes properties that are adjacent to where they are already working. Currently the EPA is putting together a schedule for the next 4 months but it's not completely full. The EPA asks that property owners leave a 2-week window for the work. Currently, the project is about 10% complete.
- Ms. Rosetti added that the EPA will approach every house to offer the cleanup services. There is a lot of paperwork associated with the process, including access consent and a homeowner questionnaire. The EPA has been setting up appointments with community members to get the paperwork started and discuss green cover options. The EPA has an information packet addressing what to expect and how to prepare for the cleanup. Ms. Rosetti also indicated that the EPA is looking for feedback on the process.
- A community member replied that she had a positive process and her children love the new backyard and loved watching the work. She feels more confident letting her children go outside and play in the yard. She indicated that there were some flies but the cleanup process was worth it.
- Mr. Beveridge suggested that next meeting could be more broad and possibly include more people who have had work on their yards and the EPA could get more feedback on the process.
- Mr. Calanog related that the next community open house will be on October 29, from 1 PM to 4 PM, and will be a Halloween celebration.

Technical Adviser Update

Community Technical Adviser John Schweizer

- Mr. Schweizer presented on the new community website. Mr. Schweizer indicated he has set up the website but that it belongs to the community and should be maintained by the community. The website has a number of features and includes safety information on how to deal with lead. There are menus on the left and the right. The menu on the left is the

community block and can be used by the community to post. There is also a “Notify the TA” feature that will send an e-mail directly to Mr. Schweizer.

- On the right side there are a number of interactive features, including the CAG forum where people can ask questions and Mr. Schweizer will respond. There are already questions about the effectiveness of the lead treatment.
- There is also a photograph archive section where photos can be submitted of the lead cleanup or other activities of interest.

Next Meeting

- There was a short discussion regarding the timing of the next CAG meeting. It was agreed that the next meeting be in January or February, with no specific date identified. Mr. Beveridge suggested if there are concerns or questions in the meantime that information will be present on the website as well as an opportunity to communicate with the EPA.
- A reporter from Oakland Local, a community blog, also spoke briefly. She indicated she has been writing an article about water pollution and will be talking about the project on Sunday October 30th. The talk will take place at 5 PM on Sunday October 30th at 1855 7th Street. Anyone with questions should approach her directly.